DP-310204

DUAL INTERDIGITATED CHAMBER SEAT BLADDER FOR OCCUPANT POSITION AND WEIGHT ESTIMATION

Abstract of the Disclosure

An occupant position and weight estimation apparatus includes an elastomeric seat bladder having physically isolated central and peripheral fluid-filled chambers corresponding to central and peripheral areas of the seat. The fluid pressure in the peripheral chamber is primarily activated by a child or infant seat, whereas the fluid pressure in the central chamber is primarily activated by a normally seated occupant. The chambers have extensions or fingers that are interdigitated so that shifting of a normally seated occupant from the central area of the seat to a peripheral region of the seat is easily detected based on changes in the relative fluid pressures in the central and peripheral chambers. An extension of the peripheral chamber at the middle forward portion of the seat that is not engaged by a normally seated occupant can also be used to detect an out-of-position occupant in close proximity to a frontal air bag.